

What is claimed is:

1. A microdot mark shape which is formed by a laser beam, on a surface of an article to be marked by using a laser as a light source, wherein

the microdot mark shape is made by dot marks each formed on each laser irradiated point,

the mark has a protrusion which protrudes in the center portion upward from the surface of the article to be marked, and

the length of each dot mark along the surface of the article to be marked is 1.0 to 15.0  $\mu\text{m}$  and the height of the protrusion is 0.01 to 5.0  $\mu\text{m}$ .

2. A microdot mark shape according to claim 1, wherein said surface of said article to be marked is a beveled portion of an outer peripheral surface of a wafer.

3. A method of forming a mark made by dots on the surface of an article to be marked by laser beams emitted from a pulse laser oscillator, comprising the steps of:

homogenizing an energy distribution of the laser beam emitted from the laser oscillator by a beam homogenizer;

forming a desired pattern by controlling a liquid crystal mask in which the maximum length of each pixel is 50 to 2,000  $\mu\text{m}$  and irradiating the liquid crystal mask with the laser beam homogenized by the beam homogenizer;

setting the energy density on a surface to be marked, of

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a split laser beam which passed through the liquid crystal mask to 1.0 to 15.0 J/cm<sup>2</sup>; and

condensing the laser beam for each dot by a lens unit, which passed through the liquid crystal mask, onto the surface of the article to be marked so that the maximum length of each dot is set to 1.0 to 15.0 μm.

4. A microdot mark forming method according to claim 3, wherein said energy density of said split laser is set within a range of 1.5 to 3.7 J/cm<sup>2</sup>.

5. A microdot mark forming method according to claim 3, wherein said energy density of said split laser is set within a range of 3.7 to 11.0 J/cm<sup>2</sup>.

6. A microdot mark forming method according to claim 3, wherein beam profile converting means which takes the form of a dot matrix of the same size as that of a pixel matrix of the liquid crystal mask and converts an energy density distribution of the laser beam into a required distribution is provided at the front or post stage of the liquid crystal mask.

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